

AMENDMENTS TO THE CLAIMS:

Please cancel Claims 2 through 4, 8, 9, 12 through 14, 18, 19, 21 through 32, 34, and 36 without prejudice to or disclaimer of the subject matter recited therein.

Please amend Claims 1, 5 through 7, 10, 11, 16, 17, 20, 33, and 35 and add Claims 37 and 38 as follows:

1. (Currently Amended) An image reproduction apparatus, comprising:

*Al*  
a storage means for storing unit configured to store a plurality of partial images obtained by dividing an entire a panoramic image by a predetermined angular field of view for each of a plurality of entire panoramic images, each panoramic image corresponding to a plurality of viewpoints; view points, the entire image having a field of view wider than a display field of view of an image displayed on display means;

a selection means for selecting any of unit configured to select the a partial images image stored in said storage means unit based on information about a position and a direction of a viewpoint, and the display an angular field of view of the image displayed on the a display means; and

a generation means for generating unit configured to generate an image corresponding to the position and the direction of a viewpoint from the selected partial image, and providing the generated image for the display, means

wherein each of the plurality of partial images shares an overlapping portion with adjacent partial images,

wherein an angular field of view of the partial image doubles the angular field of

the display, and

wherein the whole of the partial image is overlapped by adjacent partial images.

2-4. (Cancelled)

5. (Currently Amended) The apparatus according to claim 1, wherein said storage ~~means~~ unit stores each partial image in an independent file.

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6. (Currently Amended) The apparatus according to claim 5, wherein:

said position of a viewpoint moves along a road on a map; and

said apparatus further comprises a read ~~means for determining~~ unit configured to determine a file next required based on the road containing the position of the viewpoint and the moving direction before the viewpoint position information is input.

7. (Currently Amended) The apparatus according to claim 1, wherein:

said storage ~~means~~ unit stores  $m \times n$  partial images obtained by ~~n entire~~ panoramic images each comprising  $m$  partial images, and header information indicating a start position of each of the  $m \times n$  partial images in one file; and

said selection ~~means~~ unit determines a file containing ~~an entire~~ a panoramic image corresponding to the viewpoint position information, determines a partial image to be used by said generation ~~means~~ unit based on the viewpoint direction information and ~~the display field of view~~ an angular field of view of the display, and obtains a partial image to be provided according

to the header information.

8-9. (Cancelled)

10. (Currently Amended) ~~The apparatus according to claim 1;~~

An image reproduction apparatus, comprising:

a storage unit configured to store a plurality of partial images obtained by dividing a panoramic image by a predetermined angular field of view for each of a plurality of panoramic images, each panoramic image corresponding to a plurality of viewpoints;

a selection unit configured to select a partial image stored in said storage unit based on information about a position and a direction of a viewpoint, and an angular field of view of a display; and

a generation unit configured to generate an image corresponding to the position and the direction of a viewpoint from the selected partial image, and providing the generated image for the display.

wherein said storage ~~means~~ unit stores each partial image as a 90° rotated image.

11. (Currently Amended) An image reproducing method, comprising the steps of:

storing in a storage means unit ~~a panoramic image as~~ a plurality of partial images obtained by dividing ~~an entire~~ a panoramic image by a predetermined angular field of view for each of a plurality of ~~entire~~ panoramic images, each panoramic image corresponding to a

plurality of viewpoints; ~~view points, the entire image having a field of view wider than a display field of view of an image displayed on display means;~~

selecting ~~any of the~~ a partial images image stored in said storage means unit based on information about a position and a direction of a viewpoint, and ~~the display~~ an angular field of view of ~~the image displayed on the~~ a display means; and

generating an image corresponding to the position and the direction of a viewpoint from the selected partial image, and providing the generated image for the display, means

wherein each of the plurality of partial images shares an overlapping portion with adjacent partial images,

wherein an angular field of view of the partial image doubles the angular field of the display, and

wherein the whole of the partial image is overlapped by adjacent partial images.

12-14. (Cancelled)

15. (Original) The method according to claim 11, wherein said storing step stores each partial image in an independent file.

16. (Currently Amended) The method according to claim 15, wherein:

said position of a viewpoint moves along a road on a map; and

~~said apparatus~~ the method further comprises a reading step of determining a file next required based on the road containing the position of the viewpoint and the moving

direction before the viewpoint position information is input.

17. (Currently Amended) The ~~apparatus~~ method according to claim 11, wherein:

said storing step stores  $m \times n$  partial images obtained by ~~n entire~~

panoramic images each comprising  $m$  partial images, and header information indicating a start position of each of the  $m \times n$  partial images in one file; and

said selecting step determines a file containing ~~an entire~~ a panoramic image

corresponding to the viewpoint position information, determines a partial image to be used in

said generating ~~step~~ unit based on the viewpoint direction information and ~~the display field of~~

view an angular field of view of the display, and obtains a partial image to be provided according to the header information.

18-19. (Cancelled)

20. (Currently Amended) ~~The method according to claim 11;~~

An image reproducing method, comprising the steps of:

storing in a storage unit a plurality of partial images obtained by dividing a

panoramic image by a predetermined angular field of view for each of a plurality of

panoramic images, each panoramic image corresponding to a plurality of viewpoints;

selecting a partial image stored in said storage unit based on information about a

position and a direction of a viewpoint, and an angular field of view of a display; and

generating an image corresponding to the position and the direction of a viewpoint

from the selected partial image, and providing the generated image for the display,

wherein said storing step stores each partial image as a 90° rotated image.

21-32. (Cancelled)

33. (Currently Amended) A computer-executable program, comprising:

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a code of storing in a storage means unit a plurality of partial images obtained by

dividing ~~an entire~~ a panoramic image by a predetermined angular field of view for each of a plurality of ~~entire panoramic~~ images, each panoramic image corresponding to a plurality of viewpoints; view points, the entire image having a field of view wider than a display field of view of an image displayed on display means;

a code of selecting ~~any of the~~ a partial images image stored in said storage means unit based on information about a position and a direction of a viewpoint, and ~~the display an~~ angular field of view of ~~the image displayed on the~~ a display means; and

a code of generating an image corresponding to the position and the direction of a viewpoint from the selected partial image, and providing the generated image for the display,  
means

wherein each of the plurality of partial images shares an overlapping portion with adjacent partial images,

wherein an angular field of view of the partial image doubles the angular field of the display, and

wherein the whole of the partial image is overlapped by adjacent partial images.

34. (Cancelled)

35. (Currently Amended) A storage medium storing a computer-executable control program, said control program comprising:

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a code of storing in a storage means unit a plurality of partial images obtained by dividing ~~an entire~~ panoramic image by a predetermined angular field of view for each of a plurality of ~~entire panoramic~~ images, each panoramic image corresponding to a plurality of viewpoints; view points, the entire image having a field of view wider than a display field of view of an image displayed on display means;

a code of selecting ~~any of the a partial images~~ image stored in said storage ~~means~~ unit based on information about a position and a direction of a viewpoint, and ~~the display an~~ angular field of view of ~~the image displayed on the a display means;~~ and

a code of generating an image corresponding to the position and the direction of a viewpoint from the selected partial image, and providing the generated image for the display, means

wherein each of the plurality of partial images shares an overlapping portion with adjacent partial images,

wherein an angular field of view of the partial image doubles the angular field of the display, and

wherein the whole of the partial image is overlapped by adjacent partial images.

36. (Cancelled)

37. (New) A computer-executable program comprising code for effecting the

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method of claim 20.

38. (New) A storage medium storing the computer-executable program of

claim 37.

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